

REMARKS

Claims 1 through 20 were examined and stand rejected under 35 USC 102 (e), or 35 USC 103(a). The specific rejections set forth in the September 16, 2004 Office Action are as follows:

Claims 1 through 4 are rejected under 35 USC 102(e) as anticipated by Salamon et al.

Claims 5 through 20 are rejected under 35 USC 103(a) as obvious over Salalmon et al.

Applicant responds as follows:

I. Claims 1 through 4 rejected under 35 USC 102(e) as anticipated by Salamon et al

This rejection is based on the Examiner's position that Salamon et al teaches all of the specifics set forth in original claims 1 through 4. Applicant respectfully disagrees because some of the limitations of the dependent claims rejected under 35 USC 102 are not taught in Salamon. For example, claim 4 requires both a heater and a cooler for a plurality of the trays, whereas Salamon teaches only a single heat pump at each tray that may function as a cooler or a heater, and inherently needs time to change over. The present invention permits micromanagement and affords numerous

computrized temperature control options. For example, instant addition of heat to immediately counteract excessive temperature drops is readily accomplished with the present invention system. Notwithstanding these and other differences, the rejection has been obviated by the cancellation of the 35 USC 102-rejected claims. No new claims paralleling claims 1 through 4 have been submitted.

In view of these amendments, it is urged that the 35 USC 102 (e) rejection of claims 1 through 4 based on Salamon et al, have been overcome and should be withdrawn.

II. Claims 5 through 20 rejected under 35 USSC 103 (a) as obvious over Salamon et al

This rejection is based on the Examiner's position that Salamon et al does not teach all of the specific details set forth in original claims 5 through 20, but that all of these differences would be obvious to one of ordinary skill in the art in view of the Salamon et al teachings. Applicant respectfully disagrees because some of the limitations of each and every one of these claims are not taught in Salamon et al, and are not obvious thereover. Further, as mentioned above, claim 4 requires both a heater and a cooler for a plurality of the trays, whereas Salamon et al teaches only a single heat pump at each tray that may function as a cooler or a heater, and inherently needs time to change over. The present invention permits computer controlled

micromanagement to shift reactions to increase or decrease heavy bottoms or top lights to change stoicheometry and yield ratios, whereas Salamon is directed to the opposite objective of achieving reduced heat requirements to make the ideal process thermally optimal. The present invents provides for computer micromanagement and affords numerous computerized temperature control options not available in the Salamon et al device and method. For example, instant addition of heat to immediately counteract excessive temperature drops are available with the present invention system. For these reasons, all of the newly submitted claims require both a heater and a cooler at a majority of the trays, as set forth in original claim 4, and all of the new claims also have the original claim 5 limitation that specifies the details of the cooling elements a phase change type coolant with a liquid injection means and an open heat absorbent area. While the Examiner states that these limitations are not in Salamon et al but are conceptually taught, applicant respectfully disagrees. The ability to inject liquid through a port and to have an open area for heat absorption are key features that make the present invention far more efficient than Salamon et al, with uniform heating and cooling distributed over the open area in the present invention. Additionally, Salamon et al does not teach the specific combination of controls set forth in the claims, such as claimed in claims 25 and 26. Salamon et al does not teach the use of inerts for coolants that boil below room temperature. Salamon et al teaches a heat pump and not a heat exchanger as in claim 31. Likewise, the specific limitations of claims 32

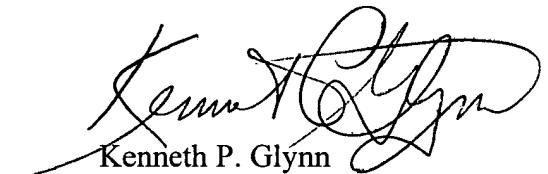
through 38 in conjunction with their main and chain claims is neither taught nor rendered obvious by Salamon et al.

In view of these amendments and arguments, it is urged that the 35 USC 103 rejection of claims based on Salamon et al is no longer applicable, has been overcome and should be withdrawn.

IV. Conclusion

In of all of the above, it is urged that new claims 21 through 38 should be allowed. A Notice of Allowance is earnestly solicited. Thank you.

Respectfully submitted,



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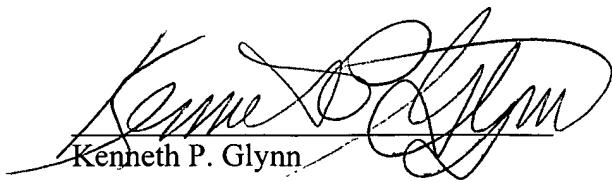
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: : Examiner:
LI YOUNG : NINA NMN BHAT
Serial No. 09/920,131 : Group Art Unit 1764
Filing Date: September 16, 2004 : Attorney Docket No.:
For: DISTILLATION SYSTEM WITH : LIY-103A
INDIVIDUAL FRACTIONATION
TRAY TEMPERATURE CONTROL

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Kenneth P. Glynn

EM RRR No. ER 416519236 US
(Docket No. LIY-103A)